

FREEDOM TRAVEL SMART CARD **WITH BIOMETRICS**

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Brief Review of the Aviation & Transportation Security act of 2001

- Creates the “Transportation Security Administrator” position within the US Department of Transportation
- John W. Magaw - Under Secretary of Transportation Security, will lead TSA and be responsible for protecting airports, highways, trains, buses, ports and waterways
 - Immediate focus
 - Background checks for all airline and airport employees and vendors of airports
 - Secure access control for employees, aircraft servicers, vendors, vehicle drivers etc. using Biometrics
 - Establish uniform system for identifying and authenticating law enforcement personnel authorized to carry a gun on board an aircraft
 - Research grant, initially \$20,000,000 for technology research including Biometrics
 - Voluntary trusted passenger expedited screening programs

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Overview – Why Security is the Enabler

Security improvements are a requirement to ensure:

- Passenger safety, convenience and perception
- Aircraft safety
- Facility safety

While at the same time allowing for reasonable levels of:

- Productivity
- Convenience
- Privacy

What is needed is to bring together the best of breed U.S. based technology solutions to provide system wide security

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Focus of Air Transportation Security System

1. Passenger Identity Authentication using Smart Cards and Biometrics to produce a ***Freedom Travel Card***
2. Enhance Database Management and Predictive software for accurate threat assessment and reduction
3. Bag matching for passengers and airport security personnel
4. Improve scanning of carry on baggage with matching to passenger and security personnel, this providing accountability
5. Airport employee and vendor background security check using government law enforcement databases
6. Real time access control using Biometrics and Smart Cards

Today, we will concentrate on the ***Freedom Travel Card***, which is a voluntary system where the remaining 5 are mandatory

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Benefits of the ***Freedom Travel Card***

- Move ***Freedom Travel Card*** passengers through the airport and especially through security more rapidly and effectively
- Allow airport security personnel more time to concentrate on undocumented passengers
- Make airports and air travel more secure

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Technology Requirements for ***Freedom Travel Card***

- All can be met with today's commercial off the shelf technology
- These requirements include:
 - Smart Card:
 - Card issue with provisions for interoperability, card security, cost effectiveness and personalization are required at point of issue
 - Biometric:
 - Fingerprint and Facial based Biometrics used to positively link the card to the cardholder during use and allowing for database searches during enrollment
 - Interactive Software:
 - An end to end security solution and interpretation of databases are required to ensure system integrity. Encompasses a device and user authentication, message and database integrity, secure data exchange and secure data (image) storage and audit trail. These are the four principals of any data security system, i. e: authentication, encryption, integrity, audit.
 - Analytic and Predictive Software:
 - Neural networks technology used to analyze and interpret databases from sources including government, airline, airport facility access points, equipment, financial and foreign sources

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We have to be more efficient in our method of moving travelers through the airport.

From a recent article in the Wall Street Journal,

“Spotting likely terrorist among the millions of ordinary passengers is akin to finding a needle in a haystack. The dumb way to find the needle is to examine every single piece of hay. The smart way is to subdivide the haystack into clumps: one clump of pieces where the needle could not possibly be; another clump of pieces where the needle is unlikely to be, but may be worth double-checking; and the small remainder of tiny pieces where the needle may actually be.”

Lets be smart about it and use the Freedom Travel Card

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Passenger Enrollment with ***Freedom Travel Card***

Freedom Travel Card is voluntary with airlines concentrating on their frequent travelers first

In operation, enrollment is accomplish by:

- Airlines will notify upcoming travelers of their offer to issue a voluntary ***Freedom Travel Card***
- The Passenger will be instructed to come to the airport 15 minutes earlier than normal and go to a designated location within the airport, bringing with him/her their frequent travel card, associated credit card, divers license, passport (if available), business card (if available), and any other documents such as Doctors statements on artificial knees, pacemaker, etc.
- Enrollment will require scanning of four flat fingers presented at one time with two flat index scans (for templates) along with imputing data from the card and other personal information along with a digital photo image

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Passenger Enrollment with ***Freedom Travel Card***

- ***Freedom Travel Card*** produced, including two encrypted fingerprint templates and issued to the passenger who will use it for his/her upcoming flight. Anticipated 30 minutes between the time of issue and the time of first use
- During the 30 minutes the system will cross check FBI, INS, Secret Service and other operational databases
- Analyze and interpret with predictive software other databases from airlines, passenger list, financial and other sources
- If something is questionable, which will be very unusual, the passenger can be detained at the gate before boarding

From there on, until something changes, the passenger will be able to use his ***Freedom Travel Card*** to speed up security with greater trust in the system

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Use of the ***Freedom Travel Card***

The ***Freedom Travel Card*** will be used at various locations at the airport:

- Check through baggage:
 - At curb side the passenger presents a ticket and ***Freedom Travel Card***. The ***Freedom Travel Card*** is read and the finger is presented to a small inexpensive scanner, the match (finger to template on Card or central database) is then completed in less than a second. Baggage tags produced could be produced with a 2D Bar Code or a MagStripe including the live template of the finger. This could be used later for bag identity matching
- Passenger check in:
 - For issuance of the boarding pass the card is again read, the finger scanned and matched. Boarding pass issued with live template on MagStripe

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Use of the ***Freedom Travel Card***

- Carry on baggage:
 - ***Freedom Travel Card*** presented, read, finger scanned and matched. The baggage scanned image is matched to the cardholder and the airport security personnel and stored for later use if needed
- Boarding:
 - Automated with the card read, finger scanned and matched and the boarding pass split with part given the passenger for seat location
- Other potential uses:
 - Baggage retrieved at destination

The ***Freedom Travel Card*** use may be expanded for other forms of travel and access

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Passenger Screening Systems Work

From the Wall Street Journal,

“As used in Israel, voluntary screening allows people willing to submit to a one-time background check and security interview to obtain a trusted-traveler I.D. card and thereafter bypass a portion of the check-in procedures. This program, instituted four years ago at Tel Aviv’s Ben Gurion Airport, allows security personnel to focus more of their resources on serious threats and dramatically reduces long security lines.”

Lets learn from a successful system and use the **Freedom Travel Card**

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